

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of producing ink jet printed images with high resistance to physical and chemical damage on plastic surfaces, comprising the steps of:
 - a. providing a plastic object;
 - b. coating at least part of the surface of the plastic object with an under-coating solution;
 - c. evaporating off the volatile part of the under-coated solution, thus depositing a solid film on the surface of the plastic object;
 - d. providing at least one ink-jet ink comprising a colorant and aqueous carrier;
 - e. jetting the ink by means of an ink-jet system onto the surface of the under-coating on the plastic object;
 - f. warming the printed surface to drive part of the water in the ink into the under-coating and to evaporate the remaining part of the water;
 - g. over-coating the dried surface with a water-based coating; and
 - h. heating the over-coating to dry or cure it and to seal-in the previously deposited ink and under-coating.
2. (Original) The method of claim 1, wherein the under-coating solution contains a mixture of hydrophilic polymer or polymers together with a hydrophobic polymer.
3. (Currently Amended) The method of claim 1, wherein the ink-jet ink colorant is a dye or a pigment.

4 - 30 (Deleted)

31. (New) The method of claim 1, wherein the plastic object is a card or a bottle.

32. (New) The method of claim 1 where the plastic object is composed of a polyester or polyvinyl chloride.

33. (New) The method of claim 1, wherein said under-coating solution is an aqueous solution.

34. (New) The method of claim 33, wherein said aqueous solution comprises:

mixtures of polyvinyl alcohol and polyacrylic acid; and a water-based emulsion containing a hydrophobic polymer.

35. (New) The method of claim 34 where the hydrophobic polymer has a pH of not more than 7.0.

36. (New) The method of claim 1, wherein said under-coating solution is a non-aqueous solution.

37. (New) The method of claim 36, wherein said non-aqueous under-coating solution comprises;

organic solvent-base mixtures;
polyacrylic acid; and
a hydrophobic polymer.

38. (New) The method of claim 37, wherein the hydrophobic polymer is an acrylic thermoplastic polymer or co-polymer.

39. (New) The method of claim 1, wherein said under-coating solution additionally comprises titanium dioxide.

40. (New) The method of claim 1, wherein said under-coating solution additionally comprises a mixture of white or opaqueing pigments dispersed therein and fillers.

41. (New) The method of claim 1, wherein said water-based coating for over-coating comprises water-soluble amino-plasts and acid catalysts.

42. (New) The method of claim 1, wherein said water-based coating for over-coating comprises water-based emulsions or a water-based emulsion plus alkali.

43. (New) The method of claim 1, performed as a single composite action, which is automated to the extent that at no stage involves human handling.

44. (New) The method according to claim 43, wherein a plastic bottle is under-coated, imaged and over-coated.

45. (New) The method according to claim 1, wherein no chemical reaction occurs.

46. (New) The method according to claim 1, wherein the under-coating is dried in sheet form for subsequent imaging and over-coating.

47. (New) The method according to claim 46, wherein a plastic card is under-coated, imaged and over-coated.

48. (New) The method according to claim 1, wherein a plastic card is coated and imaged.

49. (New) The method according to claim 1, wherein a plastic bottle is coated and imaged.

50. (New) The method according to claim 49, wherein said ink-jet image comprises a color image, additionally comprising a white under-layer, said color image viewable without influence of any contents of said bottle.

51. (New) An object imaged according to the method of claim 1, wherein the image surface is resistant to at least 100 strokes of the Crockmeter, dry or in contact with solvents, thus exhibiting high physical and chemical resistance.

52. (New) An object imaged according to the method of claim 1, wherein the coatings conform to FDA regulations for food products.

53. (New) A method of producing ink jet printed images with high resistance to physical and chemical damage on plastic surfaces, comprising the steps of:

- a. providing a plastic object;
- b. under-coating at least part of the surface of the plastic object with a solution containing a mixture of a hydrophilic polymer or polymers together with a hydrophobic polymer;
- c. evaporating off the volatile part of the under-coated solution, thus depositing a solid film on the surface of the plastic object;
- d. providing an ink-jet ink comprising a colorant and aqueous carrier;
- e. jetting the ink by means of an ink-jet system onto the surface of the under-coating on the plastic object;

- f. warming the printed surface to drive part of the water in the ink into the surface coating and to evaporate the other part of the water;
- g. over-coating the dried surface with a water-based coating; and
- h. heating the over-coating to dry it and to seal-in the previously deposited ink and under-coating.